

Feb 5th 1829
122 South 8th

No 63

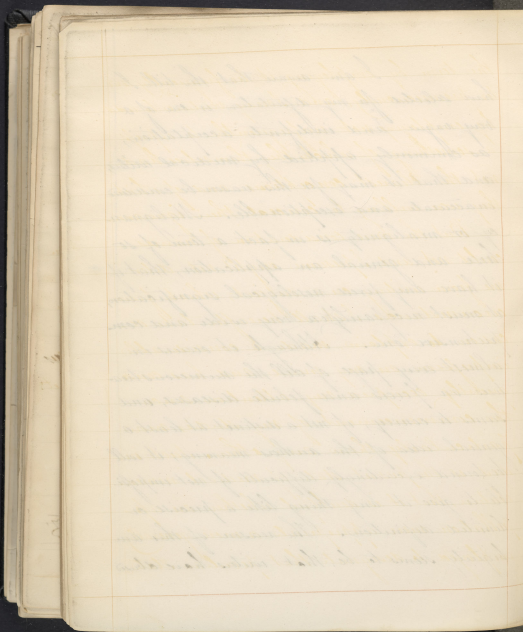
An
Inaugural Dissertation
on
some of the Causes
of
Malignant Epidemics
for
the Degree of *Pap 2 March 7. 182*
Doctor of Medicine
at
The University
of
Pennsylvania
by
Edward L. Brown
of
Nova Scotia.

Felix qui potuit unum cognoscere Causas. Vig.
Philadelphia Feb 14th
1829

a copy is called for by the University of Glasgow

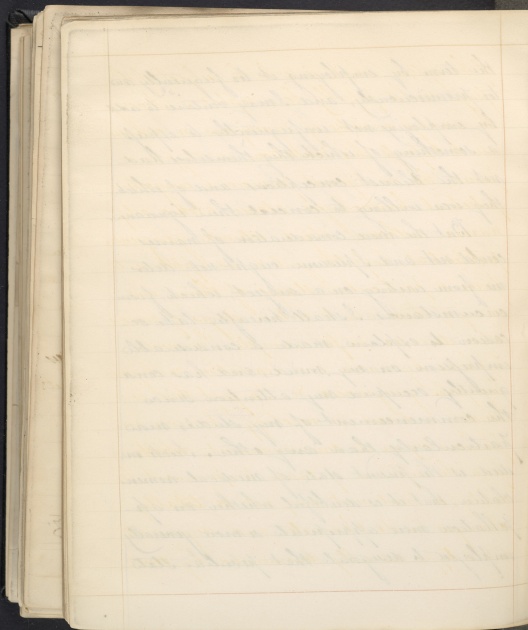
[Faint, illegible handwriting on lined paper, likely bleed-through from the reverse side. The text is mirrored and difficult to decipher.]

I am aware that the title I have selected for my dissertation is one of a very vague and indefinite acceptation, as commonly applied by medical writers, and that it may for this reason be considered inaccurate and exceptionable. Malignancy or malignity is in fact a term of so loose and general an application, that if it have any fixed nosological signification, it must necessarily be a very wide and comprehensive one. Although it occurs in almost every page of all the numerous treatises on fevers and febrile diseases, and seems to convey, if not a distinct, at least a general idea of the authors meaning; it will be found exceedingly difficult if not impossible to give it any thing like a precise or limited definition. The reason of this ambiguity seems to be, that writers have abused

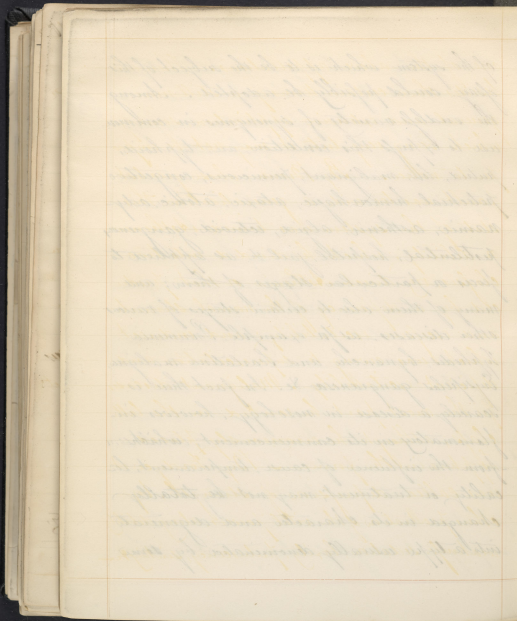


the term by employing it too frequently and too promiscuously, and I may venture to add by employing not infrequently to express a something of which they themselves had not the clearest conceptions, and of which they were willing to conceal their ignorance.

But the mere consideration of names could not and I presume ought not to deter me from writing on a subject, which, from circumstances I shall hereafter take occasion to explain, made a considerable impression on my mind, and has consequently occupied my attention since the commencement of my studies more particularly than any other. Such indeed is the present state of medical nomenclature, that it is doubtful whether an appellation more appropriate or more generally employed to designate that peculiar state



of the system which is to be the subject of this
essay could possibly be adopted. Among
the endless variety of synonyms in common
use to express this condition, are, typhoid,
putrid, ~~low~~, malignant, pernicious, congestive
petechial, hemorrhagic, ataxic, atonic, ady-
namic, asthenic, algid, icteroid, gangrenous,
pestilential, hospital, jail &c as applied to
fevers or particular stages of them; and
many of them also to certain stages of various
other diseases, as for example, Pneumonia
Typhoid, Diphtheria and Scarlatina maligna,
Erysipelas gangrenosa &c. In fact there is
scarcely a disease in nosology, however in-
flammatory in its commencement, in which
from the influence of cause, temperament, lo-
cality or treatment, may not be, totally
changed in its character and degenerate
into a type usually denominated by some



one of the above appellations. Then and besides these certain terms of a still more general and extensive application, some of which being very true it may not be improper to notice. By Brown, whose greatest fault was too wide a generalisation, this state of the system was termed Asthenia or debility, which he divided into two classes, viz. direct Asthenia or that produced by a deficiency of the normal stimuli and excessive excitability; and indirect which was owing to superexcitation and deficient excitability. Malignant diseases for the most part he ranked in the latter class; although he erroneously placed Typhus in the former. By Lordyce it was called depression of strength, by others prostration of the vital powers, atony, debility, weakness, sedation, laxity, putrescency, sinking &c.

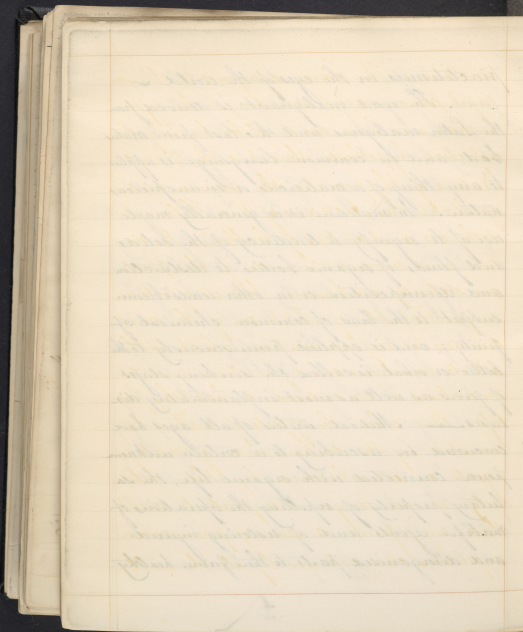
one of the more important. The
which have been taken of a still more
general and extensive distribution, however
which being very late in the year, and in the
the winter. The former, which was the
about one to one, a general distribution, the
that of the system was during the winter
a little, which I think into the
class, the first, which is that of the
out of a quantity of the same kind
and various methods; and indeed
which was during the winter, and
which was during the winter, and
for the most part, the same in the fall
class, although the same in the fall
of the same in the fall, and the same in the fall
was better than the same in the fall, and the same in the fall
the same in the fall, and the same in the fall
perhaps, which was during the winter, and the same in the fall

It would be superfluous and foreign to my purpose to enter into a discussion of the derivation, signification, and merits of these crowd appellations; especially since there is not one I presume, against which there might not justly be raised many serious and weighty objections. It is indeed a fact sincerely to be regretted, that names so puzzling to the student and so burdensome to his memory, bearing, as they do, in their very sound a convincing proof of the ignorance of the times in which they were adopted, should continue to be tolerated, and even cling to with a kind of religious fondness, in the present enlightened era of medical science. Perhaps no two sciences have undergone so great a revolution within a few years as those of Chemistry and Medicine and yet how different is the present state

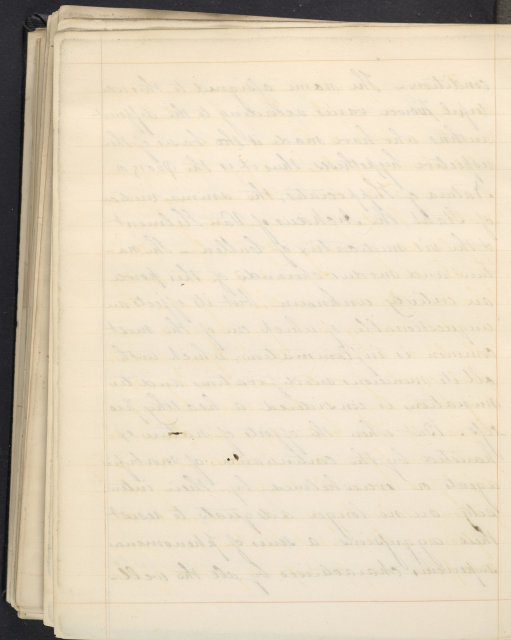
of their respective nomenclatures; while the former by rejecting all its antiquated superfluities and substituting terms which convey to the learner a ^{clear} definition of the substance or property they are intended to represent, has arrived at the highest degree of perfection; Medicine is groaning under the incumbrance of an obsolete and senseless ^{and} ~~languish~~ ^{garbage} totally unworthy of the present elevated & philosophical rank of the profession - This doating and superstitious veneration for the blunders of antiquity cannot be of long duration, a happy change the constant result of progressive improvement is to be anticipated, a change calculated to facilitate the progress of the student, contribute to the utility of the science and advance its reputation and that of its teachers and

practitioners in the eyes of the world —

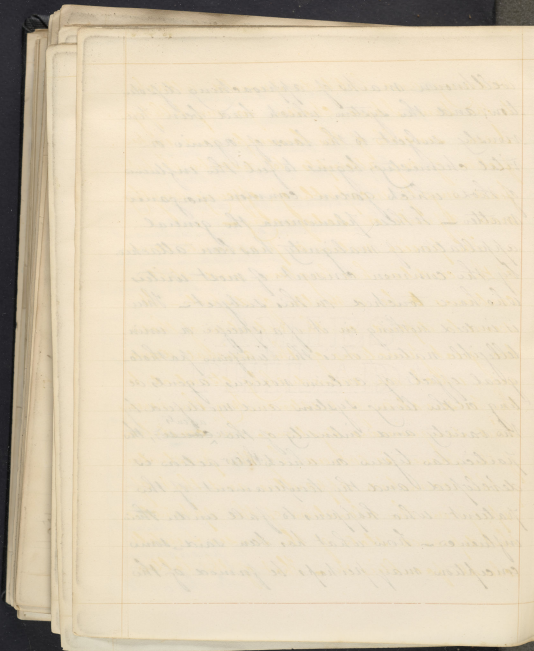
The word malignant is derived from the Latin *malignus* and this last from *malus* bad, and in common language is applied to any thing of a malicious or inauspicious nature. In medicine it is generally made use of to signify a tendency of the solids and fluids of organic bodies to destruction and decomposition or in other words to become subject to the laws of common chemical affinity; and is applied promiscuously to the latter or what is called the sinking stages of fevers as well as most inflammatory diseases. — Medical writers of all ages have concurred in ascribing to a certain unknown power connected with organic life, the salutary property of repelling the operations of noxious agents and of restoring injured and disorganised parts to their former healthy



condition - The name assigned to this wonderful power varies according to the different authors who have made it the basis of their respective hypotheses, thus it is the *poors* or *Natura* of Hippocrates, the *anima medica* of Stahl, the *Archæus* of Van Helmont & the *vis medicatrix* of Cullen - The nature and *modus operandi* of this power are entirely unknown, but its effects are unquestionable, of which one of the most common is inflammation, which with all its numerous modifications and terminations is considered a healthy process. But when the efforts of nature exhausted by the continuance of morbid agents or overwhelmed by their intensity are no longer adequate to resist these aggressions, a series of phenomena supervenes characterised by all the well-



well known marks of approaching dissection; and the system, which had been previously subject to the laws of organic or vital chemistry, begins to feel the influence of those which govern common inorganic matter - To these phenomena the general appellation of malignity has been attached by the common consent of most writers who have touched on this subject - There is indeed nothing in it of a specific or intelligible nature, it is the Summum pathological effects of certain noxious agents acting on the living system and modified by the variety and intensity of those ^{agents} ~~causes~~, the particular tissues on which their action is developed and the temperament of the patient who happens to fall under their influence - Now what has been said, some conception may perhaps be formed of the



meaning and latitude I would attach to the term I have chosen for my title page. I am sensible of the sameness and imperfection of my attempts to describe it, but find myself incapable of offering anything more definite or satisfactory -

The precise nature or proximate cause of this condition has long been and still continues to be a matter of dispute. It seems to depend on the vitiation of those two great functions of the animal economy, which are immediately essential to the preservation of existence, viz the nervous, and sanguinous systems. The condition of the former is evinced by the prostration of the locomotive apparatus and that of expression, the relaxation of the sphincters, the depraved state of the senses & intellectual faculties &c. - That of the latter

by the weak and almost imperceptible pulse, laborious respirations, defective secretion, passive hemorrhagy &c - The disturbance of these two great functions must necessarily involve all others which are either closely connected with or depend immediately on them; hence the depraved state of digestion, nutrition, calcification, secretion, absorption &c - The question, which of these systems the nervous or circulating is primarily affected and which more immediately gives rise to febrile diseases has occupied the Schools of medicine from its earliest infancy down to the present day and has given rise to the two famous theories of pathology, humoralism or that of the fluid and solidism or that of the solid - The ancient doctrine of the dissolution of the blood and putrefac-

tion

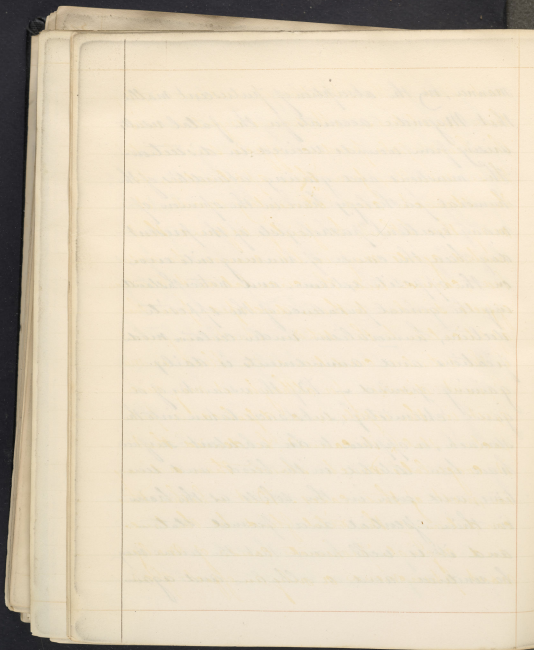
[Faint, illegible handwriting on lined paper, likely bleed-through from the reverse side. The text is mirrored across the page.]

tion of the fluids has long since been almost entirely neglected and in fact is now nearly exploded. This is the result of numerous experiments performed on different animals, by different physiologists, among which those instituted by Dr. A. Seybert & graduates of this college and published in his inaugural thesis seem to have been very satisfactory and conclusive on this point. In many years the subject has attracted but little attention, until very lately the experiments of the celebrated Magendie, M. Collard de Martigny and others would ^{seem} to favor the reestablishment of this old & neglected theory. According to these experiments, it would appear that injections of putrid matters into the veins of animals were followed by all the phenomena usually exhibited in putrid fevers. And it is in this man-

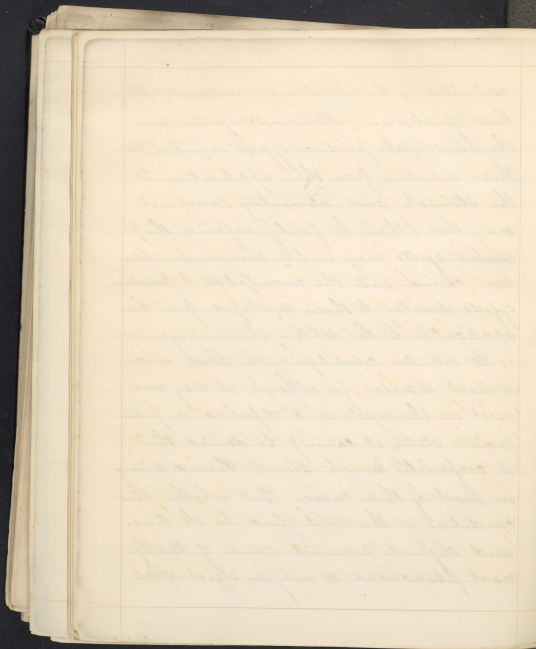
- over

manner, viz the absorption of putrescent matter
that Magendie accounts for the fatal results
arising from wounds received in dissection.

The monstrous and glaring absurdities of the
humoral pathology have in the opinion of
many excellent pathologists of the present
day been the cause of running into error
on the opposite extreme, and notwithstand-
ing the general prevalence of the opposite
doctrine, humoralism under certain modi-
fications and amendments is daily
gaining ground. By the researches of or-
ganic chemistry substances taken into the
stomach, or applied to an absorbent surface
have been detected in the blood and secre-
tions, and even in the solids as the brain
in their essential and formal state -
and it is well known that the urine may
be rendered acid or alkaline and again



neutralized by the exhibition of medicines possessing
these qualities. Medicines injected into
the blood vessels produce effects similar to
those resulting from their application to
the stomach and alimentary canal, it
may then I think be fairly inferred that
malignant agents may in like manner be ab-
sorbed, carried into the circulation & produce
effects similar to those developed from their
application to the solid. Another argument
is the vitiated condition of the blood in ma-
lignant diseases, for although it may never
exist in the vessels in a dissolved or putre-
factive state, it cannot be denied that
it coagulates much slower than ordinary
in most of these cases. But whether this
condition of the vital fluid be the true
and original proximate cause of Malignant
phenomena or only an effect of a

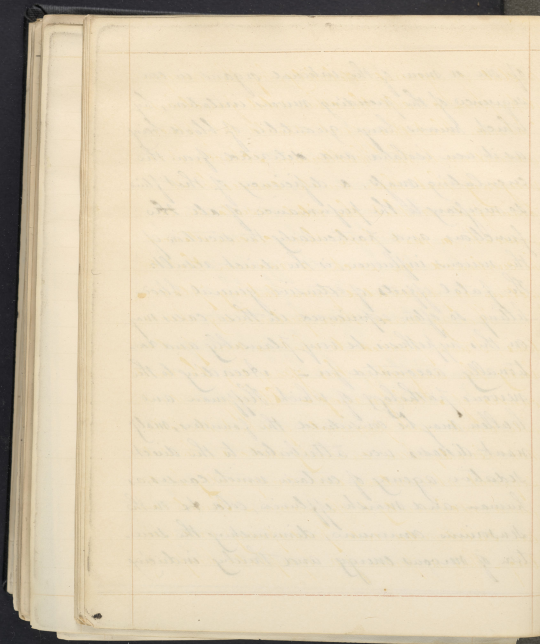


of a preceding deprivation of the solids / a question, which is perhaps not yet satisfactorily solved / it must be conceded, that such a condition of the fluids existing whether primary or secondary must reciprocally affect the solids, which are famed and receive their stimulus of action from them; and in this way materially assist the efforts of nature for their reinstatement to a healthy condition.

I have been led to offer the above remarks from a conviction that the influence of the fluids in Pathology has been undeservedly overlooked and neglected —. Many of the phenomena of malignant diseases may be ascribed to a defective elaboration of arterial blood or what is called Hematosis resulting from the depraved condition of the organs by which this function is performed; and also to the highly congested state of the capillaries

[Faint, illegible handwriting on lined paper, likely bleed-through from the reverse side. The text is organized into several horizontal lines across the page.]

of one or more of the internal organs in consequence of the preceding nervous irritation; by which means large quantities of blood being as it were isolated and detached from the circulating mass, a deficiency of that fluid so necessary to the performance of all the functions and particularly the secretion of the nervous influence, is the direct result. The fatal effects of extensive general blood-letting so often experienced in these cases may on this hypothesis be very plausibly and rationally accounted for. According to the nervous pathology of which Hoffman and Haller may be considered the founders, many want diseases were attributed to the direct sedative agency of certain remote causes, as human and marsh effluvia, cold &c on the sensorium commune, diminishing the secretion of nervous energy and thereby inducing

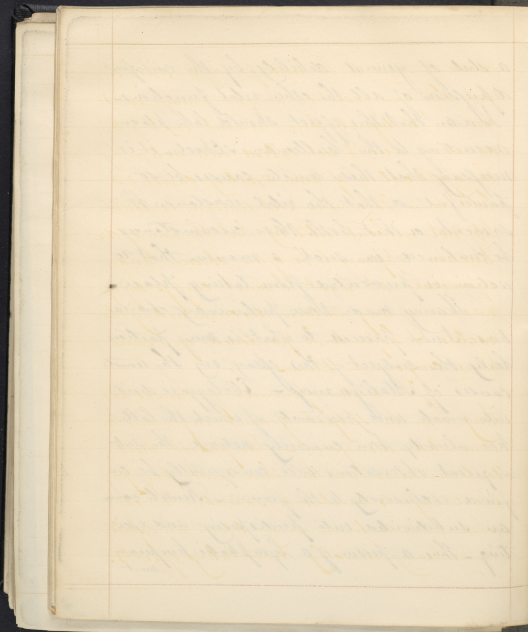


a state of general debility, by the consequent
depression of all the other vital functions.

Wade that this effect should take place
according to the Hallerian School, it is
necessary that those remote causes be so
powerful, or that the vital resistance be
so weak, or that both these circumstances
be combined in such a manner that re-
action is prevented from taking place.

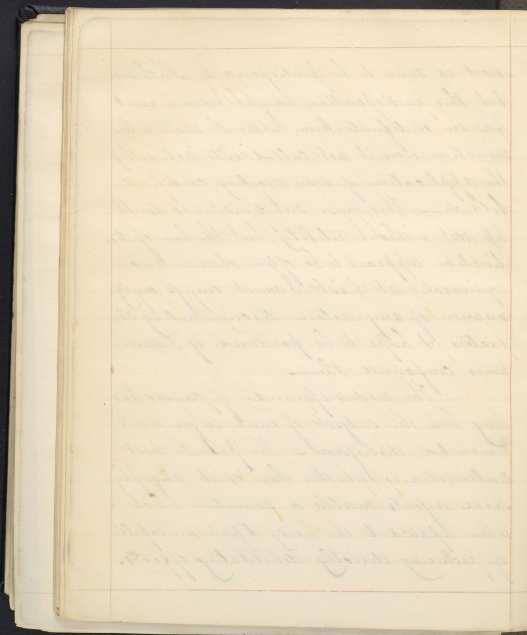
Having made these preliminary observa-
tions, I now proceed to what is more particu-
larly the subject of this essay, viz. the remote
causes of Malignancy. Etiology is divided
into remote and proximate, of which the latter
has already been cursorily noticed; the sub-
sequent observations will consequently be con-
fined exclusively to the former. Remote causes
are subdivided into predisposing and exci-
ting. Thus a person of a lymphatic tempera-

ment

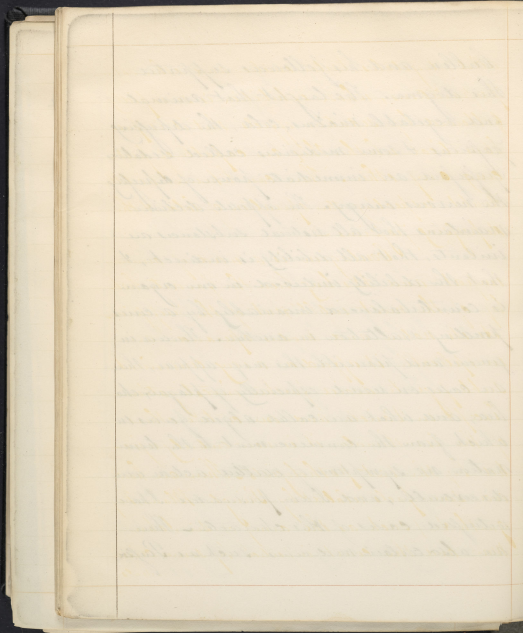


ment is said to be predisposed to Pthisis
but this predisposition might remain inert
for an indefinite time without such a ter-
mination, were it not called into action by
the application of some exciting cause, as
told to - This nice subdivision is doubt-
less not without utility, but the line of dis-
tinction appears to be often obscure and
equivocal; at least I must confess my ig-
norance of any certain discriminating cha-
racters I hope to be pardoned if I some-
times confound them -

The *modus operandi* of causes has
long been the subject of much ingenious &
animated discussion - The point most
controversial is whether there exist any phy-
sical agents morbid or sanative which
when applied to the living tissue are capable
of producing directly debilitating effects.



Cullen and his followers supported
this dogma. He taught that animal
and vegetable miasms, cold, the depressing
passions & some medicines called Sedatives
possessed an immediate power of depressing
the nervous energy. The opposite doctrine
maintains that all natural substances are
imitants, that all debility is indirect, &
that the debility induced in one organ
is counterbalanced invariably by a cor-
responding exaltation in another. However in-
genious and plausible this may appear, there
are cases on record especially of plague, cha-
lra, and what are called atydia fevers in
which from the commencement to the termi-
nation no symptoms of exalted action were
discoverable, and I am persuaded I have
witnessed cases of this character. There
are also certain medicines such as Opium

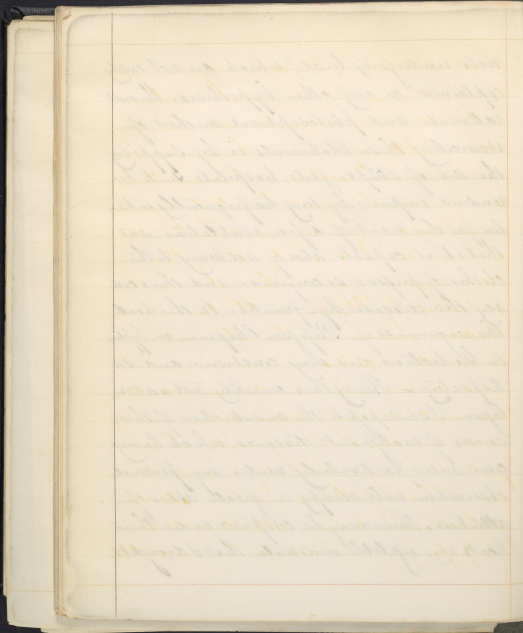


acid, digitalis, tartar emetic and other saline preparations, whose exhibition is so rapidly followed by sedative effects, that it is problematical whether they are capable of producing any other. There can likewise be little doubt respecting the operation of solas. & the depurating papsims -

Contagium is a word of ominous import and has long been the favorite hobby of the most intelligent of the physicians. As its nature and modus operandi are inexplicable it afforded a very convenient subterfuge to avoid further investigation. Except in Variola and one or two others of the Exanthemata it is now entirely rejected by the best pathologists. There are however some facts related by Pringle, Blane, Haygarth &c. such as the army of Sir John Maw and the court infected by some criminal's

[Faint, illegible handwriting in cursive script, likely bleed-through from the reverse side of the page.]

nals undergoing trial / which are not easily explained on any other hypothesis. The most rational and philosophical method of reconciling these statements is by supposing the air of ships, jails, hospitals &c to be rendered impure by being too frequently inhaled for the want of a free ventilation, and that it is capable also of adhering to the clothes of persons so confined and thus convey the disease by fomites. On this head the arguments of Professor Chapman on Typhus in his lectures are very conclusive and satisfactory - Having thus cursorily noticed contagion, I shall pass to the consideration of those causes of malignant diseases, which having come more particularly under my personal observation, will occupy a greater share of attention. These may be comprised under three heads, viz, vegetable miasmata. Next I thought,

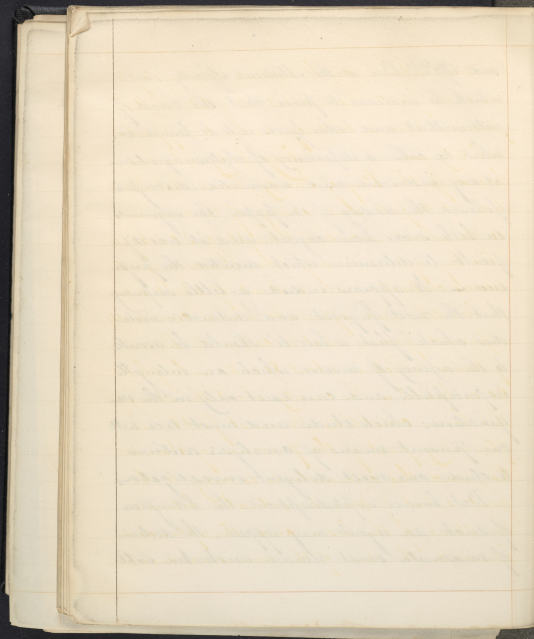


and depuration of the nervous system by mor-
tal affections - The miasmatic doctrine
has of late engrossed considerable attention,
not a little scepticism with regard to its ex-
istence has been excited, and some well writ-
ten essays on the subject have lately appeared
in the medical journals from different parts
of the world. In this city a very learned
and ingenious paper to this effect has been
published by Dr. Belli in the Journal of
Medical Sciences in which the existence of
miasmata is called in question, and the
production of what are commonly called
miasmatic diseases deduced from very dif-
ferent sources, these arguments are sup-
ported by a great number of facts illustra-
tive of his hypothesis. In Italy also this
subject seems to have attracted attention;
a paper from Dr. Folchi of Rome was lately

and the first of the winter season. The
temperature was very low, and the
wind was very strong. The snow
was very deep, and the ice was
very thick. The water was very
cold, and the air was very dry.
The ground was very hard, and the
frost was very deep. The trees
were very bare, and the leaves
were very dry. The grass was
very dry, and the flowers were
very faded. The sky was very
blue, and the sun was very bright.
The clouds were very white, and the
moon was very full. The stars were
very bright, and the planets were
very visible. The weather was very
good, and the day was very pleasant.

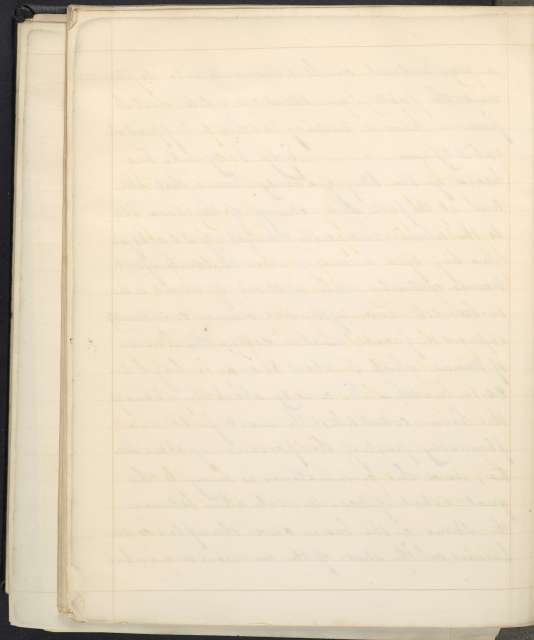
read by Dr Bell at the Medical Society, in which he endeavours to prove that the cause of intermittent and other fevers is to be found in what he calls a deficiency of electromagnetism. A very instructive and animated discussion followed the reading of the paper, the arguments on both sides were cogent, and it was difficult to determine which merited the preference. It appears indeed a little surprising that the most frequent and destructive maladies which "flesh is heir to" should be ascribed to the agency of causes, which are intrinsically imperceptible, and can exist only in the imagination; which elude and must ever with our present means of analysis continue to elude our most diligent investigations.

But however unphilosophical the admission of such an agent may appear, the doctrine of miasmata must remain unshaken until

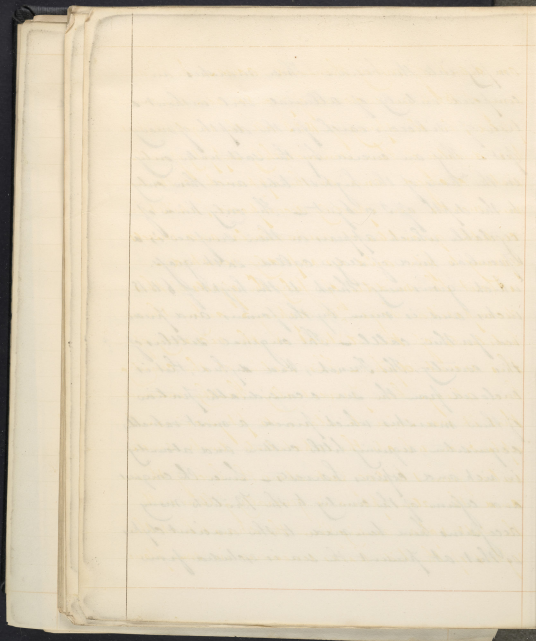


a more rational one be discovered to take its place
and the facts I am about to relate will I
presume have a tendency rather to support its
validity —

Every body who has
heard of the Bay of Fundy, knows that the
tide at the full and change of the moon rises
to the almost incredible height of 50 or 60 ft.
This bay after a course of some hundreds of miles
becomes contracted into a strait of about a mile
in breadth, and afterwards becomes considerably
expanded forming what is called the Basin
of Minas which is about 80 miles in length and
20 in breadth — The country about the shores of
this basin constitutes the most fertile and
flourishing part of the provinces of Nova Sco-
tia, and this circumstance is owing to the
great extent of marshes situated between
the shores of the basin and the uplands and
between on the shores of the numerous rivers which

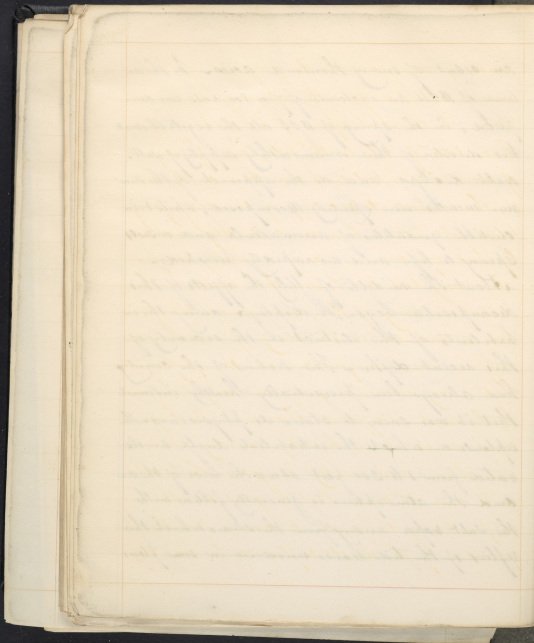


empty into the basin - These marshes are composed entirely of alluvial soil without a trace of siliceous earth for the depth of many feet - They are covered by the salt water only in the time of the highest tides and then only to the depth of 5 or 6 feet - The only kind of vegetable which appears on their surface is a peculiar kind of sedge called salt grass, which grows very thick to the height of 6 to 15 inches and is sown by the farmers and purchased for their cattle - The original settlers of this country, the French, had dykes, that is, enclosed from the sea a considerable portion of these marshes, which proved a most valuable acquisition, requiring little culture and abounding in rich and copious harvests - Since the conquest and cession of the country to the British many acquisitions have been made to the ancient dykes, so that at present the sea is excluded from



an extent of many thousand acres. In the autumn of 1824 an enclosure of 7 or 800 acres was completed; in the spring of 1825 all the vegetable matters divested of their semimonthly supply of salt-water decayed and on the approach of the summer months were speedily decomposed; whilst in credible quantities of animalcula and insects sprang to life and as rapidly perished.

About the middle of July the effects of this decomposition began to be displayed among the inhabitants of the district in the vicinity of this recent dyke. This section of the country has always been proverbially healthy inasmuch that it was said to starve its physicians. The uplands on which the inhabitants dwell are elevated from 1 to 200 feet above the level of the sea and the atmosphere is generally filled with the salt vapor arising from the shores which the reflux of the tide leaves uncovered in some places.



for many miles, or with the fragrance of the lux-
uriant vegetation from the intervening dyked mar-
shes. In the short space of six weeks, viz from
the middle of July to the latter end of August
of about 500 inhabitants more than one hundred
in the immediate vicinity of the decaying vege-
tation fell victims to a most deadly and ma-
lignant epidemic - scarce a family escaped
and many lost 4 or 5 from their number. I was
present in many of these cases and although
then uninitiated in the study of medicine, so
uniform and unequivocal were the symptoms,
that a very accurate judgment might be formed
by the most indifferent observer. The tempera-
ment as usual in healthy country places
was almost universally sanguine, the habit
full and plethoric. But so great was the pre-
disposition of the system to disease that the ap-
plication of the most trifling causes was suf-

[Faint, illegible handwriting on lined paper, likely bleed-through from the reverse side. The text is written in a cursive script.]

ficient to develop the most alarming symptoms - These were slightly varied during the first 24 hours in different subjects, according to the tissues which received the primary impression, but after the sympathies of the general system became involved, they were strikingly uniform; and prostration succeeded so rapidly that the signs of reaction were often scarcely discernible. Among the first was the case of a young merchant, who having slightly scratched his foot with a nail, experienced a violent edema of the whole limb, to which sloughing succeeded and he narrowly escaped a fatal issue - His nose was attacked with malignant erysipelas of the face, great prostration of strength, low delirium &c, but fortunately for her, her residence was at a considerable distance in the country whither she was removed, and after a long illness partially recovered - I shall now mention

in superintending his hay harvest accidentally
by picking his finger with a thorn from a thistle
in a few hours he experienced severe pain
in the part extending up to the shoulder &
clavicle, in the course of the night after the
accident, edema took place and spread
rapidly up the arm to the neck and face, in
forty eight hours gangrene followed and speedily
terminated his existence. A robust farmer
had the cutis of the face slightly removed by
the scratch of a cat. I saw him about 48
hours afterward when not a feature of his
face could be distinguished, they were all
blended in one confused mass.

Globus infamis et confuso pondere tumens.
His vital energies were at the lowest ebb
and he expired in a few hours. His wife
was taken ill and died immediately after,
her symptoms except the edema were precisely

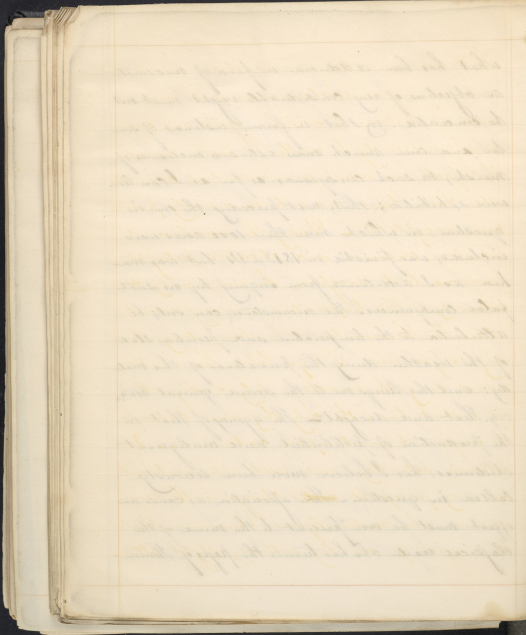
similar. Between 30 and 40 children, sometimes 4 or 5 in one family from what under ordinary circumstances would be considered a slight cold, soon experienced the fatal effects of *Cynanche Maligna* in its most deadly form. In two cases a perfect membrane was hæmked up showing evidently the existence of inflammation but without the slightest benefit to the patients.

I could detail many similar cases, which come under my observation, and which I perfectly recollect, were they necessary to support any particular hypothesis; but the only points I wish to establish from the above cases, are that the cause whatever it might have been, was a common one, and that its influence did not extend beyond the neighborhood of the recent dyspepsia. The first of these positions I think is fairly inferrible from the similarity of effects, for however varied the first symptoms might be

1
The first of the series of papers
is a list of the names of the
persons who have been
admitted to the office of
the Secretary of the
Board of Education since
the year 1850. The list
is arranged in alphabetical
order, and gives the names
of the persons, their
residences, and the dates
of their admission. The
list is a valuable
reference for the
history of the
Board of Education.

on account of the peculiar nature of the ex-
citing cause, or the liver a organ primarily af-
fected, they were universally succeeded by that
train of symptoms which so strikingly charac-
terizes the march of all malignant diseases
and which it would be superfluous to enu-
merate, as they must be present in the mind
of every one who has witnessed a fatal case of
Typhus or Yellow fever. That the cause was not
exclusively heat, moisture, vicissitudes, wind or the
general situation of the atmosphere is deducible
from the limitation of the disease to one particular
spot, from the general prevalence of health in
the country around, and in particular from the
immunity of 2 or 3 families, one of which was only fa-
ther which although in the immediate proximity
of the marsh happened to occupy very elevated
situations, placing them in all probability above
the level of the miasmatic taint. Notwithstanding

what has been adduced in favor of miasmata
an objection of very considerable weight must not
be concealed, viz that in former instances of simi-
lar and even much more extensive enclosures of
marsh, no such consequences as far as I can learn
were exhibited; that, next preceding the one in
question, in which more than 1000 acres were
included, was finished in 1813 & 14 but was man-
aged as I ascertained from inquiry by no such
fatal consequences. The circumstance can only be
attributed to the temperature and peculiar state
of the weather during the prevalence of this malar-
ia; and this brings me to the second general head,
viz. Heat and drought - The agency of Heat in
the production of pestilential and malignant
epidemics, has I believe never been seriously
called in question - Their association as cause and
effect must be ever present to the mind of the
classical reader who has turned the pages of Homer



Thyridites, Lenticulus and Lacinus - I shall omit making any general observations on the modes of spread of that as a malarial agent and confine myself exclusively to matters of fact, convinced that facts are much more important and valuable than theories and will consequently prove more acceptable - During the prevalence of the above epidemics and about a fortnight previous to its accession, the uniformity & intensity of the temperature were very remarkable - the thermometer in the shade during the day ranged from 75° to 95° F. This is not unusual during the months of July & August for a short time - the only thing remarkable was its uniform & uninterrupted continuance - Day followed after day and week after week, without any perceptible ~~and~~ change in the temperature or other meteorological phenomena - The thermometer registers for one day with very slight alter-

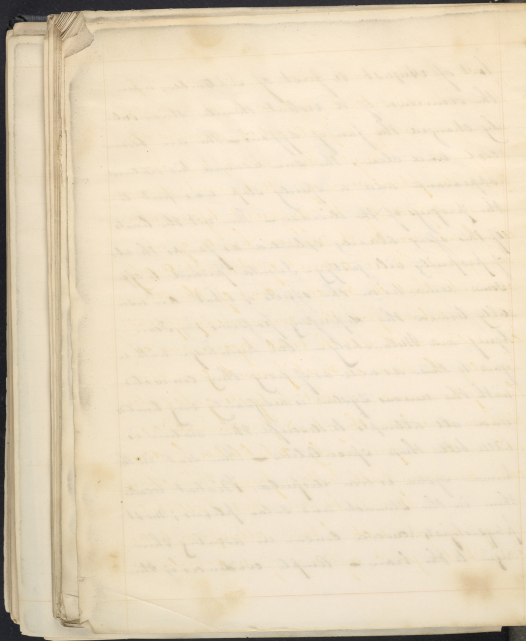
the first of the year 1840
and the second of the year 1841
the first of the year 1842
the first of the year 1843
the first of the year 1844
the first of the year 1845
the first of the year 1846
the first of the year 1847
the first of the year 1848
the first of the year 1849
the first of the year 1850
the first of the year 1851
the first of the year 1852
the first of the year 1853
the first of the year 1854
the first of the year 1855
the first of the year 1856
the first of the year 1857
the first of the year 1858
the first of the year 1859
the first of the year 1860
the first of the year 1861
the first of the year 1862
the first of the year 1863
the first of the year 1864
the first of the year 1865
the first of the year 1866
the first of the year 1867
the first of the year 1868
the first of the year 1869
the first of the year 1870
the first of the year 1871
the first of the year 1872
the first of the year 1873
the first of the year 1874
the first of the year 1875
the first of the year 1876
the first of the year 1877
the first of the year 1878
the first of the year 1879
the first of the year 1880
the first of the year 1881
the first of the year 1882
the first of the year 1883
the first of the year 1884
the first of the year 1885
the first of the year 1886
the first of the year 1887
the first of the year 1888
the first of the year 1889
the first of the year 1890
the first of the year 1891
the first of the year 1892
the first of the year 1893
the first of the year 1894
the first of the year 1895
the first of the year 1896
the first of the year 1897
the first of the year 1898
the first of the year 1899
the first of the year 1900

tions would have been applicable to sixty in due
season - The atmosphere was loaded with smoke
from the continual ^{fires} of the back settlers in clearing
their lands, to such a degree that objects were
not visible at the distance of a few yards - This
is I presume a sufficient proof of the living of
the atmosphere, though to what degree cannot be
precisely determined as no barometrical register
was kept in the neighborhood - The sun exhib-
ited a red & fiery appearance throughout the day
but more especially in the morning and evening, which
was doubtless owing to the interposition of the
dense smoke; and to this cause may also be
attributed the mildness of his rays for I recollect
perfectly, it was not painful to the eyes to gaze
at him steadily for some minutes; there was
scarcely a breath of wind during the whole time
which, in case it had blown would speedily have
dissipated the smoke. Another very remark-
-able

The circumstance was the absence of dew, not a drop was deposited, whether this was owing to the dryness of the atmosphere or perhaps more probably to the radiating power of the smoke preventing the deposition of dew in the same manner as the clouds do, or whether to both these causes jointly is not for me to decide. The drought during the whole period was excessive, for 8 or 9 weeks there was not a refreshing shower, not even a cloud was seen for an instant to obscure the scorching rays of the sun. The fires kindled in the forests spread far and wide desolating and despoiling thousands of acres of their wood and not sparing the villages & towns which chance placed in their way. It was during this period that the town of Miramichi in New Brunswick was consumed in which more than 100 of the inhabitants perished. This state of things continued until about the

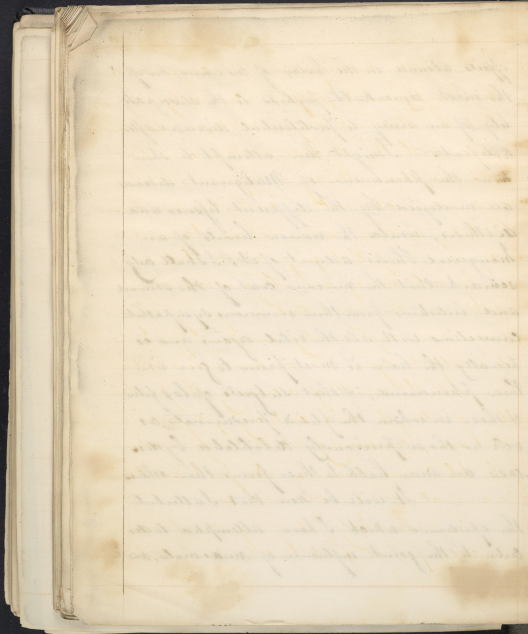
[Faint, mirrored handwriting, likely bleed-through from the reverse side of the page. The text is illegible due to fading and mirroring.]

last of August or first of September, when
the occurrence of a violent thunder storm entire-
ly changed the face of affairs - The air became
cool and clear, the sun assumed his natural
appearance and a speedy stop was put to
the progress of the disease - How vast the limits
of this effect already extended as far as the sub-
jects of propriety will justify - I would proceed to offer
some remarks on the effects of what are usu-
ally termed the depressing passions viz. Fear,
Grief and Melancholy - Our knowledge with re-
gard to these as well as of every thing connected
with the nervous system is necessarily very limited,
and all attempts to describe their nature is
little better than speculation - Their seat in the
human system is even disputed, Richat locates
them in the stomach and solar plexus; most
physiologists however concur in ascribing their
origin to the brain - Ample evidences of this



effects abound in the history of medicine, one of the most remarkable perhaps is the susceptibility of an army to pestilential diseases after a defeat. I might here attempt to show how the phenomena of Malignant diseases are modified by the different tempers and diatheses, would the narrow limits of an inaugural Thesis admit of it; I shall only remark that the mucous coat of the stomach and intestines from their numerous sympathetic connections with all the vital organs and especially the brain is most prone to give rise to these phenomena, & that subjects of a cold fibre & those in whom the fluid predominates as well as those previously debilitated by diseases are more liable to these forms than others.

It will be seen that I attribute the epidemic which I have attempted to describe to the joint influence of miasmata, and



heat - whether my inferences are correct or not
The Faculty must judge; I can only say
that the statement as far as it goes, has been
given with the strictest adherence to truth
and candour. It may be expected that I shall
offer some observations on the treatment in-
stituted in these cases; but as I could not
then be a competent judge of it, I shall pass
it by with merely remarking, that very
little was done, and that in a few of the first
cases when inflammatory symptoms prevailed
to a slight degree, venesection was resorted
to, with the result of increasing the prostrat-
ion of strength and inducing gangrene in
the arm, commencing at the axilla when
the blood was drawn - No post mortem
examinations were allowed -

The melancholy fate of my countrymen
and companions just excited me to embark

in the study of medicine, which I commenced in the ensuing autumn; and my inquiries have ever since been directed to this point more particularly than any other.

Although I have read several authors on the subject such as Fordyce, Pains, Sydenham, Linnæ, Jackson, Haygarth &c, I have avoided quotations, regarding a candid statement of facts to which I was an eye witness, preferable to the crude & premature speculations of a novice in the science —

E. F.

Vol 46 Theses

1820 - 1829

